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EXAMINER

MAKI, STEVEN D

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/533,927	Applicant(s) COLOMBO ET AL.	
	Examiner Steven D. Maki	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 60-64 and 67-121 is/are pending in the application.
- 4a) Of the above claim(s) 93-96 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 60-64, 67-92 and 97-121 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Japan 612

3) **Claims 60-64, 70, 73-79, 84, 92 and 121 are rejected under 35 U.S.C. 102(b) as being anticipated by Japan 612 (JP 10-264612).**

The claimed tire is anticipated by Japan 612's tire. See Figure 1, abstract and machine translation. The tread of Figure 1 contains geometric module / ridge as claimed. In particular, the tire tread of Figure 1 has an elongated ridge, which (a) is bounded by two oblique grooves 6, 6 (each of which is inclined at inclination angle alpha of 10-40 degrees (e.g. 20 degrees) with respect to the circumferential direction) and (b) is located between a first central circumferential groove 1 and a second shoulder circumferential groove 1. The first central circumferential groove 1 separates a circumferential center rib 2 and the elongated ridge and the second shoulder circumferential groove 1 separates the elongated ridge and a row 5 of shoulder blocks. The shoulder blocks are separated by transverse grooves which are inclined at illustrated angle of about 75 degrees with respect to the circumferential direction As

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can be seen from Figure 1, two shoulder blocks are associated with each elongated ridge. The elongated ridge is divided into four blocks by three grooves (cuts) which are transverse to the oblique grooves. The four blocks comprise a first block, a second block, a third block and a fourth block. The first block is adjacent the center rib 2. The fourth block is adjacent and aligned with the shoulder blocks of the shoulder row 5. The first block and third block each clearly have a substantially trapezoidal shape. The second block is also considered to have a substantially trapezoidal shape since the distance between the oblique grooves decreases from the second shoulder circumferential groove to the first central circumferential groove. The claimed intermediate blocks (each defining a substantially trapezoidal shape) reads on the second and third blocks. The tread also comprises sipes 8 (narrow grooves) which further divide the tread.

4) Claims 71-72 and 80-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 612 (JP 10-264612) in view of Europe 594 (EP 114594).

As to claims 71-72 and 80-81, it would have been obvious to one of ordinary skill in the art to use the claimed number of shoulder blocks / different sizes for Japan 612's tread in view of Europe 594's suggestion to use different size blocks on the left and right sides of a tire tread to reduce noise.

5) Claims 84-89 and 91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 612 (JP 10-264612) in view of Europe 600 (EP 775600) and Diensthuber (US 5,660,651).

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As to claims 84-89 and 91, it would have been obvious to one of ordinary skill in the art to provide the blocks of Japan 612's tire tread with the claimed sipes / connecting notches since (1) Europe 600 suggests providing blocks of a tire tread with sawtooth sipes 9, 10, 11 and exhaust slots 12 (Figure 1) to improve performance on winter roads and (2) Diensthuber suggest disposing sawtooth sipes 10 on blocks of an asymmetric tread to provide gripping edges and using venting grooves 15 to reduce noise.

Europe 686

6) Claims 60-64, 67-70, 73-79, 82-85 and 121 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 686 (EP 688686) in view of Trabant (US 5,256,221) and Japan 406 (JP 56-131406).

Europe 686 discloses a pneumatic tire with a tread comprising a pair of shoulder block rows and a geometric module / elongated ridge between the circumferential grooves (Figure 1). The tread also comprises sipes. The elongated ridge is bounded by a two oblique grooves 2 (inclined at 20-30 degrees with respect to the circumferential direction) and is divided by transverse grooves. In Figure 1, the intermediate blocks of the elongated ridge have a substantially parallelogram shape. Each elongated ridge is associated with two shoulder blocks. Europe 686 does not recite trapezoidal shaped intermediate blocks. However, it would have been an obvious alternative to one of ordinary skill in the art to divide the elongated ridge bounded by two oblique grooves with transverse grooves such that the ridge comprises substantially trapezoidal shaped intermediate blocks since (1) Trabandt teaches dividing a ridge between oblique grooves of a tire tread with transverse grooves such that trapezoidal shaped blocks are

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defined to provide high traction and self cleaning and (2) Japan 406 shows dividing an elongated ridge of a tire tread (albeit a circumferential ridge instead of an oblique ridge) with grooves such that the blocks either have a parallelogram shape (Figure 1) or trapezoidal shape (Figure 2).

7) Claims 85-91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 686 (EP 688686) in view of Trabant (US 5,256,221) and Japan 406 (JP 56-131406) as applied above and further in view of Europe 600 (EP 775600) and Diensthuber (US 5,660,651).

As to claims 85-91, it would have been obvious to one of ordinary skill in the art to provide the blocks of Europe 686's tire tread with the claimed sipes / connecting notches since (1) Europe 600 suggests providing blocks of a tire tread with sawtooth sipes 9, 10, 11 and exhaust slots 12 (Figure 1) to improve performance on winter roads and (2) Diensthuber suggest disposing sawtooth sipes 10 on blocks of an asymmetric tread to provide gripping edges and using venting grooves 15 to reduce noise.

8) Claims 71-72 and 80-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 686 (EP 688686) in view of Trabant (US 5,256,221) and Japan 406 (JP 56-131406) as applied above and further in view of Europe 594 (EP 114594).

As to claims 71-72 and 80-81, it would have been obvious to one of ordinary skill in the art to use the claimed number of shoulder blocks / different sizes in view of Europe 594's suggestion to use different size block on the left and right sides of a tire tread to reduce noise.

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9) Claim 92 is rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 686 (EP 688686) in view of Trabant (US 5,256,221) and Japan 406 (JP 56-131406) as applied above and further in view of Japan 207 (JP 06-135207).

As to claim 92, it would have been obvious to one of ordinary skill in the art to arrange the oblique grooves of Europe 686's tire tread such that the oblique grooves run in an extension of the transverse grooves between the shoulder blocks since Japan 207 teaches arranging oblique grooves in a tire tread having a pattern generally similar to that of Europe 686 such that the oblique grooves run in an extension of the transverse grooves between the shoulder blocks.

Fukunaga et al

10) Claims 121 and 122 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukunaga et al (US 6,607,018).

The claimed tire reads on Fukunaga et al's tire having the tread as shown in Figure 1. The claimed fourth grooves read on the lateral grooves 22. As to claim 120, the description of "inner portion" and "outer portion" fails to require structure different from that disclosed by Fukunaga et al since a tire can row forwards or backwards. As to claim 120, one oblique groove reads on groove 20 and the other claimed oblique groove reads on the combination of part of groove 20 and part of groove 22.

11) Claims 120 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al (US 6,607,018) in view of Japan 406 (JP 56-131406) or Japan 508 (JP 05-301508).

Fukunaga et al discloses a pneumatic tire with a tread wherein the tread of Figure 1 contains geometric module / elongated ridge as claimed. The claimed oblique grooves read on inclined grooves 20. The "geometric module" in Figure 1 contains two shoulder blocks 28, 28, four intermediate blocks and two center blocks. Circumferential main groove 14 is spaced from the EP. The right side of Figure 1 contains a second circumferential portion comprising a shoulder block row and two rows of inner blocks.

As to claim 120, it would have been obvious to provide the transverse grooves in the circumferential block rows such that they are offset in view of (1) Japan 406's teaching to offset transverse grooves of adjacent rows, which one of ordinary skill in the art would readily appreciate enhances slip resistance and/or reduces noise; it being taken as well known / conventional per se in the tread art that circumferentially offsetting transverse grooves in one row relative to another row reduces noise or (2) Japan 508's suggestion to slightly offset lateral groove with respect to shoulder circumferential grooves (Figure 1) ; it being taken as well known / conventional per se in the tread art that circumferentially offsetting transverse grooves in one row relative to another row reduces noise. Fukunaga et al fails to teach away from enhancing slip resistance or reducing noise.

12) Claims 60-64, 67-70, 73-79, 82-83, 92 and 97-98 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al (US 6,607,018) in view of Japan 612 (JP 10-264612) and Japan 207 (JP 06-135207).

Fukunaga et al discloses a pneumatic tire with a tread wherein the tread of Figure 1 contains geometric module / elongated ridge as claimed. The claimed oblique

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grooves read on inclined grooves 20. The "geometric module" in Figure 1 contains two shoulder blocks 28, 28, four intermediate blocks and two center blocks. Circumferential main groove 14 is spaced from the EP. The right side of Figure 1 contains a second circumferential portion comprising a shoulder block row and two rows of inner blocks. Fukunaga et al does not recite separating the elongated ridge from a row of shoulder blocks such that the elongated ridge is associated with at least two shoulder blocks. However, it would have been obvious to one of ordinary skill in the art to add shoulder circumferential grooves to Fukunaga et al's tire tread such that the elongated ridge is separated from a row of shoulder blocks and such that the elongated ridge is associated with at least two shoulder blocks since Japan 612 and Japan 207 suggest using circumferential grooves in a tire tread to improve wet performance and suggest separating an elongated ridge from a shoulder block row such that the elongated ridge is associated with at least two shoulder blocks,

Since the distance between the oblique grooves in Fukunaga et al decreases toward the ground contact center line SL, the elongated ridge has substantially trapezoidal shaped intermediate blocks.

13) Claims 84-91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al (US 6,607,018) in view of in view of Japan 612 (JP 10-264612) and Japan 207 (JP 06-135207) as applied above and further in view of Diensthuber (US 5,660,651).

As to claims 84-91, it would have been obvious to one of ordinary skill in the art to provide Fukunaga et al's asymmetric tire tread with sawtooth sipes and connecting

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notches as claimed since Diensthuber suggest disposing sawtooth sipes 10 on blocks of an asymmetric tread to provide gripping edges and using venting grooves 15 to reduce noise.

14) Claims 99-106, 109-111, 113-117 and 119-121 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al (US 6,607,018) in view of Japan 612 (JP 10-264612) and Japan 207 (JP 06-135207) as applied above and further in view of at least one of Japan 508 (JP 05-301508), Diensthuber et al 352 (US 6,619,352), Diensthuber 651 (US 5,660,651) and Japan 406 (JP 56-131406).

As to claims 99-106, 109-111, 113-117 and 119-121, it would have been obvious to one of ordinary skill in the art to provide Fukunaga et al's tread with the features as set forth in claims 99-106, 109-111, 113-117 and 119-121 in view of at least one of (1) Japan 508's suggestion to slightly offset lateral groove with respect to shoulder circumferential grooves (Figure 1); it being taken as well known / conventional per se in the tread art that circumferentially offsetting transverse grooves in one row relative to another row reduces noise, (2) Diensthuber et al '352's suggestion to form the side of an asymmetric tread having blocks defined by circumferential grooves and transverse grooves such that the transverse grooves ("fourth grooves") separating blocks of a row of an "inner row" are offset relative to shoulder grooves ("third grooves"), it being taken as well known / conventional per se in the tread art that circumferentially offsetting transverse grooves in one row relative to another row reduces noise, (3) Diensthuber 651's suggest disposing sawtooth sipes 10 on blocks of an asymmetric tread to provide gripping edges and using venting grooves 15 to reduce noise and (4) Japan 406's

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suggestion to provide block rows of a tread separated by circumferential grooves with inclined transverse grooves which are alternately inclined at angles θ_1 (70-110 degrees) and θ_2 (60 degrees or less) to thereby form trapezoidal blocks and enhance slip resistance for a wet road (abstract, figures).

15) Claims 107 and 108 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al (US 6,607,018) in view of in view of Japan 612 (JP 10-264612) and Japan 207 (JP 06-135207) and further in view of at least one of Japan 508 (JP 05-301508), Diensthuber et al 352 (US 6,619,352), Diensthuber 651 (US 5,660,651) and Japan 406 (JP 56-131406) as applied above and further in view of Japan 207 (JP 06-135207).

As to claims 107-108, it would have been obvious to one of ordinary skill in the art to incline the longitudinal sides at 1-5 degrees as claimed in view of Japan 207's suggestion to incline sides of a circumferential groove at angle θ of 1-5 degrees to improve wandering performance.

16) Claims 112 and 118 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al (US 6,607,018) in view of in view of Japan 612 (JP 10-264612) and Japan 207 (JP 06-135207) and further in view of at least one of Japan 508 (JP 05-301508), Diensthuber et al 352 (US 6,619,352), Diensthuber 651 (US 5,660,651) and Japan 406 (JP 56-131406) as applied above and further in view of Europe 594 (EP 114594).

As to claims 112 and 118, it would have been obvious to one of ordinary skill in the art to use the claimed number of shoulder blocks / different sizes in view of Europe

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594's suggestion to use different size block on the left and right sides of a tire tread to reduce noise.

Remarks

17) Applicant's arguments with respect to claims 60-64 and 67-121 have been considered but are moot in view of the new ground(s) of rejection.

18) No claim is allowed.

19) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven D. Maki/
Primary Examiner, Art Unit 1791

Steven D. Maki
January 19, 2010